

**To:** Gaines, Linda[Gaines.Linda@epa.gov]  
**From:** Lindstrom, Andrew  
**Sent:** Thur 10/6/2016 2:39:57 PM  
**Subject:** RE: PFAS question  
[Rahman et al. 2014.pdf](#)

Linda,

I still don't think PFAS sticking to the inside of the pipes is a big concern.

The big deal is the stuff in the ground (or river or lake). Get that cleaned up and anything that might be on the inside of the pipe will be washed away pretty quickly.

Please recall that drinking water treatment plants have a devil of a time trying to remove PFAS from the source water. GAC and similar types of sorbents do work, but for a limited amount of time. Mostly the PFAS are very mobile.

Right now we have no resources and we have to prioritize. I think this is a third tier issue.

Thank you,

Andy

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**From:** Gaines, Linda  
**Sent:** Thursday, October 06, 2016 10:22 AM  
**To:** Strynar, Mark <Strynar.Mark@epa.gov>; Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Washington, John <Washington.John@epa.gov>  
**Subject:** RE: PFAS question

Thank you all for the replies. This is making me wonder. The other issue is some of the worst concentrations we find are in private wells, so what would happen there? I am always looking at sites to see if there are opportunities for research, but I think this might be better studied in a lab. I am picturing a setup of pipe with PFAS contaminated water running through it. The experiment would really need old, oxidized pipe though. [Can you tell I kind of miss the lab?] Really the question I would need answered is, if it can stick, is it reversible, and if so, what kind of time and flow conditions are necessary to reverse the binding.

I am going to keep this in mind when we set research objectives, or if I see some situation or place to find money where this would be important.

Andy, I also saw that article about Flint. When I read it, I said to myself, of course there is PFAS in the water. Like that city needs anything else. I don't find it too shocking though because from what I have heard the Flint River is really contaminated with everything.

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**From:** Strynar, Mark  
**Sent:** Thursday, October 06, 2016 9:41 AM  
**To:** Gaines, Linda <[Gaines.Linda@epa.gov](mailto:Gaines.Linda@epa.gov)>; Lindstrom, Andrew <[Lindstrom.Andrew@epa.gov](mailto:Lindstrom.Andrew@epa.gov)>; Washington, John <[Washington.John@epa.gov](mailto:Washington.John@epa.gov)>  
**Subject:** RE: PFAS question

I am not aware of anyone having looked at this issue in the scientific literature.

From a chemistry standpoint it is likely feasible. Pipes in our water system like in our analytical equipment are certainly sites of potential sequestration. Of addition OM builds up or some other adsorptive media I can envision this COULD occur.

Mark

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**From:** Gaines, Linda

**Sent:** Thursday, October 06, 2016 8:32 AM

**To:** Strynar, Mark <[Strynar.Mark@epa.gov](mailto:Strynar.Mark@epa.gov)>; Lindstrom, Andrew <[Lindstrom.Andrew@epa.gov](mailto:Lindstrom.Andrew@epa.gov)>; Washington, John <[Washington.John@epa.gov](mailto:Washington.John@epa.gov)>

**Subject:** PFAS question

I apologize, but every once in a while I am going to email y'all and ask a really odd ball question. I hope you don't mind, but you are my expert panel. ☺

I saw a news article this morning about Flint moms traveling to Hoosick Falls as they are all dealing with water contamination. One of the women is quoted as saying that they think the stuff (PFOA) has built up in the pipes. I know of at least one PFAS application factory (ChemFab in Merrimack NH) where the state found that the stack was still emitting PFOA even though they stopped using it several years ago. I can understand, from an engineering perspective, PFAS that was heated, then cools off as it goes up the stack, and does not make it out the stack and sticks there. Since PFAS is soluble in water, I wouldn't think it would precipitate out in the pipes. However if the pipes were old and oxidized, or the fittings where the flow is slightly interrupted, etc., this might slightly change the situation. Do any of you think PFAS sticking in the pipes or fittings is even possible? Has anyone looked at this at all? If someone has, I would love to have a reference because this is the type of thing I could get a question on, and it would be great to have a reference to refer to.

Thanks,  
Linda

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